

WHAT TO EXPECT: MINIMALLY INVASIVE SURGERY

BEFORE

- 1 Your physician will evaluate your condition and consider all treatment options.
- 2 If surgery is the best option, your spine surgeon will discuss adverse events, risks, pre, and post-operative procedures.
- 3 Once admitted to the hospital, you will be taken to a pre-op room and prepared for surgery (put to sleep, etc).

DURING

- 1 An x-ray is taken of your spine to identify the location of the operative disc space.
- 2 Through a small incision, the lumbar spine will be accessible from your side.
- 3 Disc removal will take place followed by insertion of a structural cage (interbody fusion device) packed with bone graft.
- 4 Screws may be placed through the cage to fixate it, or a plate and screws may be placed over the cage.
- 5 Your surgeon closes the incision and moves you into recovery.

AFTER

Your physician will determine post-operative procedures and safety guidelines to follow at home.

IS AN LLIF RIGHT FOR ME?

Your spine surgeon may determine an LLIF procedure is a good option if you:

- ▶ Are skeletally mature with symptomatic neural compression at one or more levels of the spine
- ▶ Received 3-6 months of non-operative treatment

ADVERSE EVENTS & RISKS

All surgeries present risks and complications that are important to discuss with your physician prior to your surgery. Listening to your physician's guidance both before and after surgery will help ensure the best possible outcome from your procedure.

Specific adverse events associated with the spinal implant procedure include, but are not limited to:

- ▶ Failure to fuse (Pseudarthrosis)
- ▶ Interbody device or hardware malfunctions
- ▶ Damage to the structures of the spine (nerves, vessels, muscles, abdominal contents, etc)

Please contact your physician to discuss all potential risks.



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LLIF

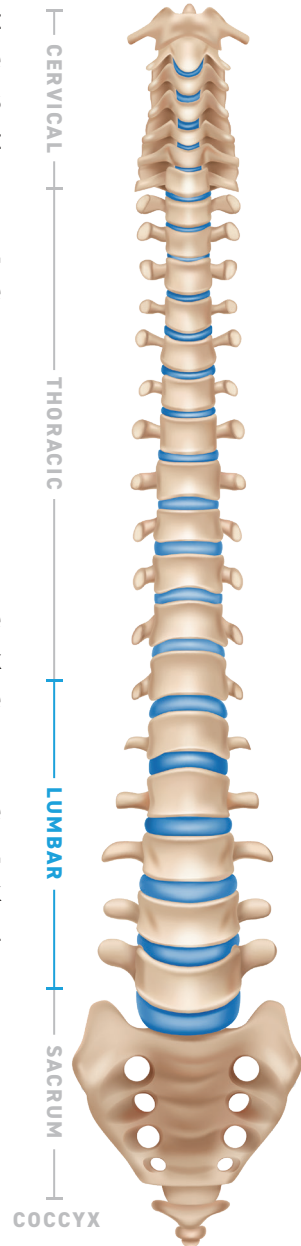
LATERAL LUMBAR INTERBODY FUSION



4WEB®

ANATOMY OF THE SPINE

- ▶ The spine is one of the most significant structures in the human body which supports much of the body's weight and protects the spinal cord.
- ▶ The spine is composed of bones, called vertebrae, which are divided into three main sections:
 - Cervical (7 vertebrae)
 - Thoracic (12 vertebrae)
 - Lumbar (5 vertebrae)
- ▶ Below the lumbar spine is the sacrum, followed by the coccyx (tailbone), or the distal end of the spine.
- ▶ Individual vertebrae are separated by intervertebral discs, which act as cushions or shock absorbers between the vertebral bodies.



TRUSS THE DIFFERENCE™

WHAT IS CAUSING MY PAIN?

There are several primary causes of lumbar spine problems. The majority of the symptoms are caused by disc, bone, or ligaments pressing onto the nerve roots or spinal cord.

DEGENERATIVE DISC DISEASE (DDD)

During the natural aging process, the discs between each vertebral body can lose their flexibility, height, or elasticity which can cause discs to herniate, bulge, or leak their gelatinous core.

SPONDYLOLISTHESIS

Spondylolisthesis is a condition where your vertebrae have moved forward or backward. This can lead to a narrowing of the spinal canal, causing pressure on your nerves if left untreated.

SPINAL STENOSIS

Spinal stenosis is the narrowing of the cavity where your spinal cord and nerve roots pass through. The common cause for this is spinal degeneration through age. If untreated, this pressure on your nerves can cause numbness or pain.

SYMPTOMS

Conditions in which one of the vertebrae slips forward or backward and can lead to deformity of the spine and narrowing of the spinal canal. Typical symptoms include:

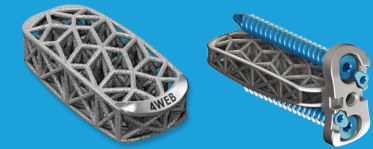
- Lower back pain
- Muscle spasms
- Numbness
- Burning
- Thigh or leg pain
- Weakness
- Tingling

WHAT ARE MY TREATMENT OPTIONS?

Many symptoms can be treated through methods that involve:

- Pain management
- Rest and/or activity modification
- Physical therapy
- Steroid injections

Your physician may suggest spinal surgery if you do not gain relief from non-operative forms of treatment or if symptoms are increasing/worsening.



WHAT IS LLIF?

Lateral Lumbar Interbody Fusion (LLIF) is a procedure used to treat problems associated with DDD such as spine instability and deformities.

In this procedure, the surgeon works on the spine from the side (lateral) and removes a spinal disc in the lumbar spine. An interbody fusion implant with bone graft is inserted into the space between the two vertebrae where the disc was removed and supporting fixation is added (screws, plates, etc).

The goal of the procedure is to stimulate the vertebrae to grow together into one solid bone, a process known as fusion. Fusion creates a rigid and immovable column of bone in the problem section of the spine. Possible benefits include:

- Pain relief
- Stability
- Return to activities